

CLAIMS

1. A method of expression of a computer object, comprising a step of linking a plurality of colors provided in advance with a plurality of computer objects handled involving a computer respectively and expressing the plurality of computer objects by different colors.

2. A method of expression of a computer object as set forth in claim 1, wherein a computer object is expressed by the attribute of a color printed on one or more dots on a recording medium based on the linkage relation between said computer object and said color.

3. A method of expression of a computer object as set forth in claim 2, wherein said recording medium is made of any of paper, plastic panel, glass, wood panel, ceramic panel, a sheet, a liquid crystal panel, a medium able to be recorded as color, and combinations of the same.

4. A method of expression of a computer object, comprising a step of linking a different color numerical value with each of a plurality of computer objects handled involving a computer and expressing each of the plurality of computer objects by a color numerical value.

5. A method of expression of a computer object as set forth in claim 4, further comprising a step of assigning a color to each of said color numerical values and using both of a correspondence between said color numerical values and said computer objects and a correspondence between said colors and said color numerical values to link said computer objects with said colors.

6. A method of expression of a computer object as set forth

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*claim 4*  
A in ~~claim 4 or 5~~, further comprising a step of setting a maximum allowable range of number of elements of said color numerical values considering the reproducibility of said color and setting said color numerical values in that range.

7. A method of expression of a computer object, comprising a step of establishing a plurality of computer object groups, a step of establishing a correspondence between color numerical values and computer objects having a different correspondence for each of said computer object groups, and a step of arranging all of said computer objects to be handled at one of the plurality of computer object groups so as to improve the ease of use of said computer objects.

8. A method of expression of a computer object as set forth in claim 7 comprising:

a step of designating the plurality of computer object groups as first hierarchy groups, dividing the first hierarchy groups into further groups to establish a plurality of second hierarchy groups when the number of the first hierarchy groups becomes large, and including each of the first hierarchy groups in one of the second hierarchy groups;

a step of similarly successively establishing third hierarchy groups, fourth hierarchy groups, etc.; and

a step of linking colors with the different hierarchies of groups so as to form an arrangement improving the ease of use of said computer objects.

9. A method of expression of a computer object, comprising a step of establishing cyclic object relations comprised of a color numerical value-object relation, color-color numerical value relation, and color-object relation so that when converting a

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computer object to a color numerical value, converting the color numerical value to a color, and converting the color to a computer object, the computer object after conversion becomes the same as the computer object before conversion.

10. A method of expression of a computer object as set forth in claim 9, further comprising simultaneously transmitting, transferring, and recording one or more correspondences of the cyclic object relations required for regenerating a computer object when transmitting, transferring, and recording a computer object converted to a color or color numerical value.

11. A method of expression of a computer object as set forth in claim 8, further comprising a step of designating a common objects computer objects designed to be able express by their combination all types of computer objects included in any certain hierarchy of groups and using these common objects to express a series of computer objects.

12. A method of expression of a computer object as set forth in claim 11, further comprising establishing common object relations comprised of a color-object relation, color numerical value-object relation, and color-color numerical value relation between common colors and common color numerical values in correspondence with the common objects and using these to transmit, transfer, record, and regenerate the series of computer objects converted to the common color numerical values or common colors.

13. A method of expression of a computer object as set forth in claim 12, further comprising simultaneously adding a common object relation when transmitting, transferring, and recording a computer object using a common color or common color numerical value.

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15. A method of recording a computer object by a computer handling a plurality of computer objects, comprising:

recording a color entity on a recording medium.

17. A method of recording a computer object as set forth in claim 16, further comprising establishing a maximum allowable range of number of elements of said color numerical values considering the reproducibility of the colors and setting color numerical values within that range.

18. A method of recording a computer object as set forth in claim 15, further comprising, for output of said color entities, assigning addresses to a recording surface of a recording medium and arranging color dots in accordance with those address.

19. A method of recording a computer object as set forth in claim 18, further comprising designating an order of output and input of color entities by addresses.

24. An apparatus for recording a computer object as set forth in claim 23, further comprising using a correspondence of colors and color numerical values and a correspondence of color numerical values and computer objects when converting said computer object to said color or when converting said color to said computer object.

regenerating the computer object from said input color based on a correspondence between colors and computer objects; and outputting said regenerated computer object.

26. A method of reproducing a computer object as set forth in claim 25, further comprising using a correspondence of colors and color numerical values and a correspondence of color numerical values and computer objects when converting said computer object to said color or when converting said color to said computer object.

27. A method of reproducing a computer object as set forth in claim 26, further comprising establishing a maximum allowable range of number of elements of said color numerical values considering the reproducibility of the colors and setting color numerical values within that range.

a processor for regenerating the computer object from said input color based on a correspondence between colors and computer objects; and

an output device for outputting said regenerated computer object.

29. An apparatus for reproducing a computer object as set forth in claim 28, further comprising using a correspondence of colors

32. A method of communication of a computer object among a plurality of computers comprising transmitting the computer object

37. An apparatus for recording and/or reproducing a computer



38. An apparatus for recording and/or reproducing a computer object as set forth in claim 37, wherein said filter provides a filter correspondence table comprised of a list of colors or color numerical values and compares an input color or color numerical value against the filter correspondence table to judge if acceptance is possible.

40. A method of recording a computer object comprising assigning a specific function to one or more specific colors based on a color-object relation or independent from a color-object relation to give a function of designating a computer object group hierarchy, a function of judgement and checking before converting a color entity to a computer object, a security function, etc.

41. A method of recording a computer object as set forth in claim 40, further comprising correcting a change in color over time or correcting a difference in characteristics of input or output of color between color input/output devices by assigning a plurality of color information to one specific color, arranging the designated plurality of colors after a color entity as color entities, and

42. A method of recording a computer object comprising recording by linking one or more attributes, selected from among a plurality of attributes including shapes of graphics such as a circle, square, or bar or other printable attributes, in addition to color with a computer object as the attributes of a color entity.

44. A method of recording a computer object comprising establishing a color-object relation or color-color numerical value relation linking a single computer object or color numerical value to a combination of a plurality of different general colors and enabling a single computer object to be recorded on a plurality of color dots arranged continuously or arbitrarily on a recording medium.

46. A method of preparing a code comprising linking each of a plurality of colors provided in advance with information and expressing said information by different colors.

47. A method of preparing a code as set forth in claim 46, further comprising expressing corresponding information by a

50. A method of preparing a code as set forth in claim 49, further comprising assigning a color to a color numerical value and using both of a correspondence of color numerical values and information and a correspondence of colors and color numerical values to link the information with colors.